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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,973	12/11/2000	Ruston Panabaker	14531.93	4645

22913 7590 03/26/2004

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EXAMINER

MANNING, JOHN

ART UNIT PAPER NUMBER

2614

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/734,973

Applicant(s)

PANABAKER, RUSTON

Examiner

John Manning

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5, 7-9, 14-16, 18-23, 27, 29, 31 and 38-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Carr (US Pat Pub No 2003/0133043).

In regard to claim 1, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The claimed step of creating a schema document, the schema document comprising at least one of (i) a trigger data structure, (ii) an announcement data structure, (iii) a package data structure, (iv) a timeline data structure, and (v) a carousel data structure is interpreted by the examiner as being written in the alternative such that the claimed limitation may be met by "a trigger data structure", "an announcement data structure", "a package data structure", "a timeline data structure" or "a carousel data structure." This claimed step is met by the content creator 12 providing enhancement data to transport operator 14 (Figure 1). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger" (Paragraph 0020, Lines 3-4). The enhancement data includes synchronization information (Paragraph 0013). The

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claimed step for accessing the schema document, the schema document comprising at least one instruction for the delivery of enhanced programming content is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19). The claimed step for analyzing the at least one instruction to retrieve the timeline data structure, the timeline data structure comprising an event controlling the delivery of the enhanced programming content to the receiver is met by controller 106 in conjunction with the software routine 108 (referred to as a transport routine). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes synchronization information. The examiner

interprets synchronization information to be timeline data. The claimed step for delivering the enhanced programming content to the receiver when the event occurs is inherent to the disclosed system.

In regard to claim 3, the claimed step for accessing the schema document comprises the step of retrieving the schema document from a repository containing a plurality of schema documents is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19).

In regard to claim 5, the claimed limitation of the enhanced programming content comprising at least one of an announcement element, a trigger element, and a package

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element is met by the content creator 12 providing enhancement data to transport operator 14 (Figure 1). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger" (Paragraph 0020, Lines 3-4). The enhancement data includes synchronization information (Paragraph 0013). The examiner interprets the resource to be the package element.

In regard to claim 7, the claimed step of synchronizing the enhanced programming content with the television programming is met by "a trigger synchronizes the enhancement data with the TV transmission" (Paragraph 0021).

In regard to claim 8, the reference discloses that the enhancement data is delivered with a communications protocol. "The three components may be transmitted using Internet Protocol (IP) multicast to the receivers" (Paragraph 0021).

In regard to claim 9, the reference discloses two types of protocols which met the limitations for transport A protocol and transport B protocol. "The three components may be transmitted using Internet Protocol (IP) multicast to the receivers. An IP multicast standard is described in Request for Comment (RFC) 1301, entitled "Multicast Transport Protocol." RFCs may be available at website address [<http://www.ietf.org/rfc.html>]" (Paragraph 0020, Lines 4-8). And, the "ATVEF Specification may utilize a one-way transmission protocol (the Unidirectional Hypertext Transfer Protocol or UHTTP, described in the ATVEF Specification) to deliver resource data" (Paragraph 0021, Lines 9-12).

In regard to claim 14, the claimed step for delivering an announcement signal comprising the announcement data structure to the receiver, the announcement signal

identifying file availability of enhanced programming content to the receiver is met by the ATVEF announcement. "Generally, an ATVEF announcement indicates that enhancement data is being transmitted, a resource includes one or more files that contain the enhancement data" (Paragraph 0021, Lines 1-3). The steps of delivering a package comprising the package data, delivering a trigger signal comprising the trigger data structure and in response to a selection by the viewer to receive the enhanced programming content, a step for displaying the enhanced programming content to the viewer is met by: "Generally, an ATVEF announcement indicates that enhancement data is being transmitted, a resource includes one or more files that contain the enhancement data, and a trigger synchronizes the enhancement data with the TV transmission. An announcement may describe the location of both the resource stream and the trigger stream. For each television (TV) channel, one or more enhancements may be offered as choices presented to the user, who can select which of the enhancements, if any, to view" (Paragraph 0021, Lines 1-9).

In regard to claim 15, the "package" may include at least one file containing enhanced programming content. "Enhancement data may include graphics (e.g., web pages, multimedia information, or other digital data files), presentation layout" (Paragraph 0013, Lines 13-15).

In regard to claim 16, the "package" may include at least one link to enhanced programming content. "Enhancement data may include graphics (e.g., web pages, multimedia information, or other digital data files), presentation layout" (Paragraph 0013, Lines 13-15).

In regard to claim 18, the step of accepting a notification displayed to the viewer of the availability of enhanced programming content is disclosed. "For each television (TV) channel, one or more enhancements may be offered as choices presented to the user, who can select which of the enhancements, if any, to view" (Paragraph 0021, Lines 7-9).

In regard to claim 19, the reference discloses the enhancement data is stored in storage medium 113 and is "accessed" by the controller 106. Storage medium 113 is a computer-readable medium, which inherently has a plurality of data fields. The claimed limitation of a first data field containing data representing the availability of enhanced programming content and a second data field containing data representing the location of the enhanced programming content is met by the announcement, which indicated both the availability and the location of the enhanced programming content. "An announcement may describe the location of both the resource stream and the trigger stream" (Paragraph 0021, Lines 5-6). The claimed limitation of a third data field containing data representing at least one trigger, the at least one trigger controlling the delivery of the enhanced programming content met by the content creator 12 providing enhancement data to transport operator 14 (Figure 1). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger" (Paragraph 0020, Lines 3-4). Where the trigger inherently controls the delivery of the enhanced programming content. The claimed limitation of a fourth data field containing data representing a timeline, the timeline controlling the delivery of the first data field,

the second data field, and the third data field to the receiver is met by the stored enhancement data that includes synchronization information (Paragraph 0013).

In regard to claim 20, the disclosed announcement is stored as enhancement data in storage medium 113; therefore the announcement is an announcement data structure.

In regard to claim 21, the disclosed package is stored as enhancement data in storage medium 113; therefore the package is a package data structure.

In regard to claim 22, the "package" may include at least one file containing enhanced programming content and a link to enhanced programming content.

"Enhancement data may include graphics (e.g., web pages, multimedia information, or other digital data files), presentation layout" (Paragraph 0013, Lines 13-15).

In regard to claim 23, the disclosed trigger is stored as enhancement data in storage medium 113; therefore the trigger is a trigger data structure.

In regard to claim 27, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The claimed step of creating a schema document, the schema document comprising at least one of (i) a trigger data structure, (ii) an announcement data structure, (iii) a package data structure, (iv) a timeline data structure, and (v) a carousel data structure is interpreted by the examiner as being written in the alternative such that the claimed limitation may be met by "a trigger data structure", "an announcement data structure", "a package data structure", "a timeline data structure" or "a carousel data structure." This claimed step is met by the content creator 12 providing enhancement data to transport operator 14

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(Figure 1). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger" (Paragraph 0020, Lines 3-4). The enhancement data includes synchronization information (Paragraph 0013). The claimed step for retrieving a schema document is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is retrieved by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes synchronization information. The examiner interprets synchronization information to be timeline data. It is inherent that

synchronization/timeline data define a specific time relationship between two events (i.e. a schedule).

In regard to claim 29, the claimed step of delivering programming to the receiver, the programming containing at least one of (i) the announcement, (ii) the trigger, and (iii) the package is disclosed. "Generally, an ATVEF announcement indicates that enhancement data is being transmitted, a resource includes one or more files that contain the enhancement data, and a trigger synchronizes the enhancement data with the TV transmission. An announcement may describe the location of both the resource stream and the trigger stream" (Paragraph 0021, Lines 1-6).

In regard to claim 31, the claimed step of defining at least one element for each announcement, trigger, and package is disclosed. "Generally, an ATVEF announcement indicates that enhancement data is being transmitted, a resource includes one or more files that contain the enhancement data, and a trigger synchronizes the enhancement data with the TV transmission. An announcement may describe the location of both the resource stream and the trigger stream" (Paragraph 0021, Lines 1-6).

In regard to claim 38, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The claimed step for retrieving a schema document is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is retrieved by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored

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in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19). The claimed step for analyzing the at least one instruction to retrieve the timeline data structure, the timeline data structure comprising an event controlling the delivery of the enhanced programming content to the receiver is met by controller 106 in conjunction with the software routine 108 (referred to as a transport routine). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes synchronization information. The examiner interprets synchronization information to be timeline data. The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes synchronization information. The examiner interprets synchronization information to be timeline data. It is inherent that synchronization/timeline data define a specific time relationship between two events (i.e. a schedule).

In regard to claim 39, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The claimed act for retrieving a schema document is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is retrieved by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19). The claimed act for analyzing the at least one instruction to retrieve the timeline data structure, the timeline data structure comprising an event controlling the delivery of the enhanced programming content to the receiver is met by controller 106 in conjunction with the software routine 108 (referred to as a transport routine). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes

synchronization information. The examiner interprets synchronization information to be timeline data. The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes synchronization information. The examiner interprets synchronization information to be timeline data. It is inherent that synchronization/timeline data define a specific time relationship between two events (i.e. a schedule).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4, 30, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Valdez Jr. (US Pat No 6,426,778).

In regard to claim 2, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose a step for viewing television programming deliverable to the receiver and in response to viewing the television programming, a step for creating the schema document associated with the television programming. The Valdez Jr. reference teaches viewing television programming deliverable to the receiver so as to facilitate the editing of the "compositions" or enhance content and in response to viewing the television programming creating the schema document associated with the television programming so as to enhance the viewing pleasure of the television viewer. "Media

playback 311 provides a facility for playing back compositions locally at the playback system or may transmit a composition as video transmission 321 and data transmission 323" (Col 8, Lines 36-40). And, "to support editing of compositions of such a variety of media, a media editing system 309 is provided that may create data structures for organizing and storing information regarding a composition and perform operations for manipulating these data structures" (Col 8, Lines 22-26). Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with viewing television programming deliverable to the receiver so as to facilitate the editing of the "compositions" or enhance content and in response to viewing the television programming creating the schema document associated with the television programming so as to enhance the viewing pleasure of the television viewer.

In regard to claim 4, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose the step for creating the schema document comprises a step for creating the schema document with an authoring tool. The Valdez Jr. reference teaches a graphical user interface with an enhanced program editing system so to increase the ease of use for the operator. Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with the step for creating the schema document comprises a step for creating the schema document with an authoring tool for the stated advantage.

In regard to claim 30, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to

explicitly disclose the use of XML. The Valdez Jr. reference teaches the use of XML so as to represent a wide variety of document types. Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with the use of XML for the stated advantage.

In regard to claim 34, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose the use of an interface module configured to receive requests for modifications to the schema document; (b) a stream module configured to modify the schema document following the requests received by the interface module; and (c) a send module configured to manipulate the schema document and the enhanced programming content for delivery to the receiver. The Valdez Jr. reference teaches an "interface module" configured to receive requests for modifications to the schema document; (b) a "stream module" configured to modify the schema document following the requests received by the "interface module"; and (c) a "send module" configured to manipulate the schema document and the enhanced programming content for delivery to the receiver. "Software systems may then modify, combine, or enhance these video and audio tracks to produce a broadcast-quality production, such as a motion picture or newscast. These systems may include editing software that may allow a user to select different segments of audio and video, prepare clips for replay, and perform splicing between clips, among other functions" (Col 1, Lines 19-25).

In regard to claim 35, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to

disclose an "interface module" configured to receive requests to generate a schema document, the schema document defining the enhanced programming content deliverable with the television programming;(b) a "stream module" configured to generate the schema document in response to the requests received by the "interface module"; and (c)a send module configured to deliver the enhanced programming content to the receiver module.The Valdez Jr. reference teaches an "interface module" configured to receive requests to generate a schema document, the schema document defining the enhanced programming content deliverable with the television programming;(b) a "stream module" configured to generate the schema document in response to the requests received by the "interface module"; and (c)a send module configured to deliver the enhanced programming content to the receiver module so as to create interactive programming deliverable to the user. "According to one aspect, a method is provided for processing a video signal using an editing system program. The method involves of associating an interactive element to a portion of a video presentation to be transmitted and displayed on a viewer, wherein the interactive element has a predefined relationship to the portion and transmitting the interactive element to the viewer at a predetermined time relative to a transmission of the portion" (Col 4, Lines 14-21).

5. Claims 10-11, 17, 24-25, 28, 32-33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr.

In regard to claim 10, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to

explicitly disclose delivering the enhanced programming content before a deliver-by time. However, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the Carr system with delivering the enhanced programming content before a deliver-by time so as to ensure that the receiver system receives the enhanced programming data necessary for an interactive viewing experience.

In regard to claim 11, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose delivering the enhanced programming content by a start time. However, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the Carr system with delivering the enhanced programming content by a start time so as to allow the receiver system to be interactive.

In regard to claim 17, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose the trigger comprising a link to enhanced programming content. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known that a trigger comprises a link to enhanced programming content so as to announce the availability of the interactive television experience to the user. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement Carr with a trigger that comprises a link to enhanced programming content so as to announce the availability of the interactive television experience to the user.

In regard to claim 24 and 25, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose that the timeline controls at least one of (i) a starting time for delivering the enhanced programming content to the receiver and (ii) a stopping/completion time for delivering the enhanced programming content to the receiver. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known that a timeline controls at least one of (i) a starting time for delivering the enhanced programming content to the receiver and (ii) a stopping/completion time for delivering the enhanced programming content to the receiver so as to define the schedule. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement Carr with a timeline controls at least one of (i) a starting time for delivering the enhanced programming content to the receiver and (ii) a stopping/completion time for delivering the enhanced programming content to the receiver so as to define the schedule.

In regard to claim 28, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly the step of verifying the schema document against a stored verification document. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known to verify a document against a stored verification document so as to ensure the proper document is transmitted. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement Carr with the step of verifying the

enhancement data against a stored verification document so as to ensure the proper document is transmitted.

In regard to claim 32, the claimed interactive module configured to create at least one schema document, the schema document being configured to define the enhanced programming content in a standardized configuration, the schema document comprising at least one of (i) a trigger data structure, (ii) an announcement data structure, (iii) a package data structure, (iv) a timeline data structure, and (v) a carousel data structure is met by the content creator 12 providing enhancement data to transport operator 14 (Figure 1). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger" (Paragraph 0020, Lines 3-4). The enhancement data includes synchronization information (Paragraph 0013). Receiving the enhanced programming content and displaying the enhanced programming content to a viewer is met by "For each television (TV) channel, one or more enhancements may be offered as choices presented to the user, who can select which of the enhancements, if any, to view" (Paragraph 0021, Lines 6-9). The reference fails to explicitly disclose an encoder module, in communication with the interactive module, configured to encode the enhanced programming content. However, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the Carr system with an encoder module, in communication with the "interactive module", configured to encode the enhanced programming content so as to transmit both the enhanced programming content and the television programming on the same stream.

In regard to claim 33, the claimed step for storing and retrieving a schema document is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is retrieved by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19).

In regard to claim 37, Carr discloses the communications line comprises a plurality of different channels. "To provide for greater flexibility and/or to alleviate bandwidth concerns of the transport medium 22, some embodiments of the invention transmit (using IP multicast) enhancement data associated with multiple A/V channels (e.g., TV channels) over a link that is separate from the transport medium used to transmit A/V content (or, alternatively, that is part of the same delivery mechanism as

the A/V content but is not associated with any A/V channel, e.g., an MPEG-2 transport stream with ancillary information in a data-only program separate from the A/V programs)" (Paragraph 0025, Lines 1-10).

Claims 6, 12-13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Goodman et al. (US Pat No 6,427,238).

In regard to claim 6, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose delivering the enhanced programming content in an order selected from the group consisting of a sequential order and an asynchronous order. This claimed step is interpreted by the examiner as being written in the alternative, such that the claimed limitation may be met by delivering the enhanced programming content in a "sequential order" or "an asynchronous order." The Goodman et al. reference teaches a timeline data structure that functions as the carousel data structure where the data modules are in sequential order (Figure 3) so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with a timeline data structure that functions as the carousel data structure so as to provide a sequentially cyclic time-structured method of providing enhanced programming to the viewer.

In regard to claim 12, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose a timeline data structure that functions as the carousel data structure.

The Goodman et al. reference teaches a timeline data structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with a timeline data structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer.

In regard to claim 13, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose a carousel data structure functions as the timeline data structure. The Goodman et al. reference teaches a carousel data structure that functions as the timeline data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with a timeline data structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer.

In regard to claim 26, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose a timeline data structure that functions as the carousel data structure. The Goodman et al. reference teaches a timeline data structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the Carr system with a timeline data structure

that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows.

- The Ullman et al. (US Pat No. 6,018,768) reference discloses an enhanced video programming system and method for incorporating and displaying retrieved integrated Internet information segments.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 703-305-0345. The examiner can normally be reached on M-F: 7:30 - 5:00 (off every other Wednesday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9695 for regular communications and 703-746-9695 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 308-HELP.

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A handwritten signature in cursive script, appearing to read "J. Miller", written in black ink.

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600